



School of Information Sciences

Course Profile: Scripting Languages

Course Number: INF 7440

Credits: 3

MLIS Prerequisite(s): INF 6080

MSIM Co-requisite(s): INF 6000

Rationale for Inclusion in Curriculum:

Students will be employed by organizations competing in the Information Age which is characterized by rapid change, voluminous data, and complex dynamics. The student may be responsible for implementing content on and managing the organization's website. This course is intended to advance the website design and development skills and the technology understanding of the library and information science student. These skills will enable graduates to effectively compete for employment, assist in the development of engaging content, and effectively use website design and development productivity tools.

INF 7440 requires the graduate student to use development tools and techniques to design and develop engaging rich interactive websites using popular and open source programming languages such as php, Java, AJAX, Visual Basic, C#, and JavaFX and using web development languages such as XAML, DHTML, XML, XSL, and Cascading Style Sheets. This course does not require any technical knowledge beyond the content covered in INF 6080.

Learning Outcomes:

By the end of the course, students will be able to:

1. incorporate the fundamentals of developing web pages using the structured life cycle model;
2. add relevant and significant functionality to web pages using managed code;
3. integrate functionality onto the website to dynamically display data and manage website navigation, security, and debugging; to build a game; to perform library mashups; to develop animations;
4. design strategies to enhance the website appearance using various tools and techniques;
5. develop a research avenue for the investigation of internet resources;
6. expand their ability to think and reason rigorously;
7. understand, apply, and integrate multimedia capture and presentation tools into websites;
8. competently utilize web authoring, design, development, and testing tools;
9. link to, access, and update databases on a domain or cross-domain servers;

10. formulate strategies to determine how to use and find information available on the internet and relate that to scripting information needs.

Content:

Advanced websites will be developed in a Library and Information Science setting. The following topics are examples of what may be covered in this course:

1. Layout Management: Students focus on using various layout controls.
2. Calendar or Clock Project: Students learn about managed programming language, data types, objects, namespaces, and events handling.
3. Web Controls: The application model for web development, web form fundamentals, and web controls are investigated.
4. Game Creation: Games are created using various techniques discussed.
5. Mashups: Library mashups are created.
6. Logo Creation: Students complete vector graphic techniques and shapes.
7. Images: Techniques to display images such as deep zoom, brushes, and transforms are used.
8. Animation / Transition: Animation techniques and animated transitions are investigated.
9. Multimedia: Media element controls, properties, splash screens, sound, video, and video players are investigated.
10. Navigation: Navigation using tab control, menu navigation, and menu control are investigated.
11. Styles and Themes: Resource dictionaries, styles, visual state manager, templates browser integration, master pages, and themes are investigated.
12. Database: Data binding, collections, web services are discussed.

Course Methodology:

The course delivery methodology will include:

1. Discussion boards
2. Lectures
3. Demonstrations
4. Supplemental Material
5. Additional Readings
6. Projects

Evaluation of Student Performance:

1. Creation of rich interactive and engaging websites
2. Completion of class assignments
3. Quizzes / Exams

Students will have access to web design and development software tools to complete assignments.

Text: To be determined

Approved in Principle: 1/12

Updated: 3/16